

Appl. No. : **10/553,509**
Filed : **October 18, 2005**

REMARKS

Priority

The Examiner states that the foreign priority claim is improper because Applicant did not provide a translation of the non-English priority document and statement that the English translation is accurate.

The Examiner refers to M.P.E.P. 1.78 (a)(2), but Applicants believe that 37 C.F.R. § 1.78 (a)(2) is intended. This rule pertains to indicating if the International Application was published in English. Our preliminary amendment of October 18, 2005 amended the specification to show that the PCT application had been published in a non-English language as required. Regarding the requirement for an English language translation of a provisional application, Applicants do not claim priority to a non-English language provisional application so this section is not believed to be relevant to the present case.

The Examiner is directed to M.P.E.P. 201.15 which clearly states that the only time that a verified English translation of the foreign priority document is submitted is to overcome an intervening reference. In the present case, the cited references for the rejections under 35 U.S.C. § 103(a) are both before the filing date of the foreign priority application.

Applicant respectfully submits that the priority claim is proper. Reconsideration is requested in view of the comments above.

Rejection under 35 U.S.C. § 103(a)

Claims 1-9 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Shuldiner, et al. (US Patent No. 5,766,851) in view of Hiratsuka, et al. (IDS 7/24/06).

The nucleic acid probes of the claimed invention have a nucleotide sequence starting at nucleotide 183 of SEQ ID NO: 1 and a length of 8 to 30 nucleotides, or a nucleotide sequence ending at nucleotide 196 of SEQ ID NO: 2 and a length of 7 to 30 nucleotides. This feature is not taught by either of the cited references. That is, neither Shuldiner nor Hiratsuka, et al. teach probes having the specific endpoints as claimed.

Among the many cytosines that could be labeled for detection of $\beta 3$ adrenaline receptor mutations, the cytosines at 183 of SEQ ID NO: 1 and 196 of SEQ ID NO: 2 are critical for detecting the Trp64Arg mutation by Tm analysis. When probes as claimed are used, which have cytosine at the 5' end (position 183) or 3' end (position 196), changes in fluorescence intensity

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that could be analyzed by Tm analysis were observed. However, when probes having cytosine other than cytosine 183 or 196 at the 5' or 3' end, respectively, were used, changes in fluorescence intensity were not observed (see specification, page 12, first 5 lines of text).

Shuldiner, et al. disclose only a part of the nucleotide sequence having the β 3AR mutation and fail to teach the criticality of nucleotides 183 and 196. Shuldiner, et al. do not teach or suggest that the cytosines at positions 183 and 196 should correspond to the 5' end and 3' end of the probes, respectively.

This deficiency is not corrected by Hiratsuka, et al. Hiratsuka, et al. disclose a probe labeled with fluorescence tag and a method for detecting single nucleotide polymorphisms by using the probe. However, they do not teach the specific positions in the probes as claimed.

Accordingly, one of ordinary skill in the art would not have a reasonable expectation of success in achieving the claimed invention by combining Shuldiner, et al. and Hiratsuka, et al. The importance of the cytosines at positions 183 and 196 for the 5' and 3' ends of the probe, respectively, could not have been predicted based upon the cited references.

Claims 2-9 are believed to be patentable at least because they include all of the limitations of claim 1, which Applicant asserts is patentable for the reasons given above.

In view of Applicant's arguments, reconsideration and withdrawal of the above ground of rejection is respectfully requested.

CONCLUSION

In view of the foregoing Remarks, it is respectfully submitted that the present application is in condition for allowance. Should the Examiner have any remaining concerns which might prevent the prompt allowance of the application, the Examiner is respectfully invited to contact the undersigned at the telephone number appearing below.

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Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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